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THE PRESENT CONDITIONS OF INFANT LIFE, AND THEIR EFFECT ON

THE NATION

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[For further reference to the Society, see last page.



# THE PRESENT CONDITIONS OF INFANT LIFE, AND THEIR EFFECT ON THE NATION

When the educated men and women of this country realize the almost complete failure of our present method of rearing the infants of the working class, and the danger to our national existence which such a state of affairs clearly and definitely portends, it is scarcely to be believed that the necessity for immediate and radical action will be denied.

About one-fourth of the total deaths are contributed by the deaths of infants under one year of age, as shown by the official returns. Of the survivors among the working classes, about one-half appear to be so injured by the conditions as to be incapable of developing into healthy adults; so that not only do they contribute little in the shape of work or production, but many of them become a most severe incubus on the country by reason of the accommodation in the shape of lunatic

asylums, hospitals, workhouses, infirmaries, prisons, etc., that is required to deal with them.

The mortality is a severe indictment of our present system, for the lesser mortality among the infants well fed and cared for in the homes of the well-to-do tends to disguise in the returns what is happening among the poorer classes. Here the mortality is extreme, and Dr. E. W. Hope, Medical Officer of Health for Liverpool, has given an account of the conditions.

In his inquiry, 1,082 families in which the death of an infant had occurred were taken consecutively, and certain particulars concerning these were ascertained. 'The total number of children born in these families had been 4,574, but out of that number 2,229 had died—practically all in infancy—representing 487 deaths out of every 1,000 born. The most remarkable series of excessive mortality occurred in twelve families, in which the large total of 117 infants had been born, and no less than 98 had perished in infancy. These extreme examples occurred in families in which, so far as municipal sanitation is concerned, there was very little to choose between them and many of the families who rear all, or nearly all, their children.'

Serious as such a mortality is, it is not the most serious indication of present conditions. It is those who survive that provide the most critical aspect of the problem. Since such a large number of the

infants among the poorer classes die as a result of the severity of the conditions to which they are subjected, the question at once arises as to how far those who have escaped death are affected. In the absence of a 'Register of Sickness,' it is impossible to deal with statistics of disease as distinguished from mortality. But certain considerations are clear. Death is the most severe result, and a great number of infants that do not die are seriously and permanently injured.

If we proceed to test the argument by an investigation of the injuries resulting from the present infantile conditions, we are overwhelmed with the practical demonstration on all hands.

Mr. W. Hall conducted a most painstaking inquiry in Leeds. He examined 2,335 Board School children, and found that more than half were rickety.

Maternal nursing is becoming more and more impracticable for the mother in the working classes, and consequently the great majority have to be fed by some substitute for the natural food. Among this great number of substitute-fed infants, it is becoming a comparatively rare thing to find a single case of healthy growth and development. They are either dead or diseased by the end of the first twelve months. The following accounts, derived from mothers bringing their babies to the Infants' Hospital, are fairly typical of what is happening

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among a large proportion of the poorer classes at the present moment:

I. Infant aged ten weeks, weighing 5 pounds 12 ounces. The mother was the wife of a compositor, and had given birth to three children. The first died at eight months of age from 'infantile enteritis and exhaustion'; the second suffered in the same way, but it did not die. Its age was twenty-one months, it could not walk, had 'got the rickets,' and for the previous eight months had been an out-patient at a well-known children's hospital. The third was the case admitted to the Infants' Hospital. It died within a few days of its admission, so that the relic of the family of three was one infant irretrievably injured.

II. Infant aged seven months, weighing 7 pounds 10 ounces. The mother had given birth to twelve children, of whom six had died. Five of these died of wasting at the ages respectively of six months, two years, five months, and two at three and a half years. The infant brought to the hospital died within a short time of its admission. Of the survivors it was difficult to obtain a definite account, but the youngest child was brought to the hospital. It was in an extremely unhealthy condition, and, although three years old, was quite unable to walk.

III. Infant aged three and a half months, weighing 8 pounds 9 ounces. Mother had given birth to twelve children, of whom eight were dead. 'All goes to little skilingtons and then they dies.' Of the survivors, one was the case admitted; one aged six years walked at sixteen months of age. Another aged three could hardly walk, and was just cutting the first teeth.

The causes which have led to this state of affairs are not far to seek.

The natural food of the infant is its mother's milk,

which under normal conditions varies both in quantity and quality from soon after the birth of the infant to the time of weaning.

The great accumulation in towns and the development of our industries, with the attendant stress and tension, have resulted in the complete incapability of a very large proportion of mothers to nurse their infants. The present conditions are due primarily to this cause, and secondarily to the general absence of an efficient substitute for the natural food.

Malnutrition in the infant is probably the chief cause of the retarded development of the country. The disease known by the name of 'rickets' affords but one example of the terrible effects. The general appearance of the 'rickety' infant is sufficiently well known. Unfortunately, the serious bony deformities are not by any means the cardinal results of the disease. They attract most attention because they are the most obvious upon casual observation. But rickets affects to an equally serious extent the brain, the nervous system, the muscles, and, indeed, no tissue of the body escapes. By reason of the chest deformities the lungs are seriously injured, and bronchitis, broncho-pneumonia, pulmonary tuberculosis, etc., are largely the secondary results of these injuries.

The proportion of persons with normally developed chests suffering from serious lung diseases is extremely small. This is so well known that in

the hospitals for diseases of the chest the deformities due to rickets are almost as common as the special diseases which it is their business to treat.

Epilepsy, insanity, and allied conditions, largely owe their origin to defective structure of the nervous system, due to infantile malnutrition. Rickets is probably the commonest cause of genuine *incapacity*. Among the degenerates who never really work, and who spend their lives in and out of the prison and workhouse, the signs of the disease are most marked. These individuals are incapable of any sustained effort, and the reason is to be seen in the laterally compressed head, the flat vertex, and the 'bossy' forehead.

In regard to resistance to disease (a most important factor in relation to the general health of the population), infantile malnutrition plays a radical part in reducing this almost to extinction. One of the best illustrations of this is the reaction to specific infectious diseases, such as measles and scarlet In the really healthy child these diseases fever. usually produce but temporary disturbance, and it is no uncommon experience to hear the mother express the opinion that the child seems rather the better for it. With the effects of malnutrition present, the difference is extreme. The resistance to the disease is either so weak that the child rapidly succumbs, or is so diminished that it suffers from sequelæ, such as tuberculosis, middle-ear disease, and other severe

affections, as a result of its incapability of meeting adverse circumstances.

Taking the whole country through, the expense of the present conditions in regard to hospitals, workhouses, infirmaries, prisons, and asylums, is enormous. And the greater part of this expense is entirely unproductive and largely preventable. Disease cannot be regarded as a sign of progress; it is a sign of decay, and when it exists in an abnormal amount it is a sign of destruction.

To achieve a sound system it is essential that this hopeless wasteful expenditure of millions and millions of pounds each year should be radically dealt with. The money that is needed must be expended, chiefly in so reforming the present conditions that the terrible mortality is greatly reduced, and above all in preventing infants and young children being reared in such a manner that sooner or later they must constitute a permanent charge on the public purse.

The present situation may be illustrated, rather than precisely defined, by a few figures. We may assume that a strong working man should have a working life of about forty years. We may assess his average wage at £1 per week. We must assume that his wage more or less represents the value of work done, else his employer could not pay it. Hence his producing value to the State is on this basis about £2,000.

If we apply this estimate to the figures already quoted in reference to Liverpool, we realize the effects more clearly—1,082 families; 4,574 children born, 2,229 died. It would not be fair to assume that all were born healthy. Making an extreme allowance (approximately 33'3 per cent.), this leaves us with 3,049 infants that ought to have lived. This means a loss of £6,098,000. Since the basis of the estimate is the male worker, it may be objected that the number of female infants should be deducted; but the potential value of the female is at least as great as the actual value of the male, and hence this consideration cannot diminish the loss. But we have still to deal with the 2,345 survivors. We have the gravest reasons for supposing that a great majority of these could not be capable of real work. If we pass 1,000 as either healthy or not sufficiently injured as to be incapable-an extravagant allowance-we still have a further loss of £2,690,000. So that in a single large town we find that an inquiry comprising 1,082 families reveals a financial loss of £8,788,000.

It is not contended that, dealing with such indefinite data, these statistics are absolutely accurate. But they appear to broadly indicate the extreme gravity of the present situation, and any argument tending to diminish the monetary loss must be altogether neutralized by the fact that in the estimate the cost of treating the 1,345 incapables has been entirely neglected.

There are many conditions, such as overcrowding, intemperance, ignorance of mothers, etc., all of which play an important part. But one cause surmounts all these — the improper feeding of the infant. This is the cardinal dominating factor of the situation, and it needs to be grappled with in the most radical manner.

Moreover, it is extremely probable that to attack this problem of *food* is the most effective means of dealing with the contributory causes. To fine or imprison a man because he consumes an inordinate amount of alcoholic liquor is not within the bounds of wise legislation. But it is quite a different matter when the baby at home is being starved, while a large proportion of the weekly wage of the father is being spent at the public-house. It merely becomes a question of proving that the father was in a position to make adequate provision for his infant, and neglected to do so.

It is most important that parental responsibility should not be undermined. But the present conditions are calculated to seriously endanger the sense of responsibility. Death and disease among infants are so prevalent that their extreme incidence is already regarded by the poorer mother as normal, and it is essential that this attitude should be radi-

cally altered. This can only be done by the intervention of others. The less is included in the greater, and the more we insist on parental responsibility the more do we emphasize the responsibility of the State.

An extreme case enables us to define the issue. The father drinks, and so does the mother. The child is starving. The particular degree of moral delinquency of the parents may require investigation, but it can scarcely be contended that the health and existence of one innocent individual are to be dependent upon the conduct of two drunken individuals. The primary function of government is essentially opposed to such a contention.

The policy to be pursued must be one dictated by justice and common-sense. In extreme cases the infant must be removed from the 'care' of those who have shown themselves altogether unfit for the performance of their duties. It must be adequately fed, clothed, and tended.

The next stage is with the parents. Whether the ordinary prison is the most suitable place for the father must be open to question. If he will not work, there is no reason why he should eat. In the establishment to which he is consigned for neglecting his child, the food given to him should be dependent on the amount of work done. The mother would probably be most benefited by gentler measures, for she is generally the victim of environment. In

some such way a great deal would be done to develop the idea of parental responsibility, and to arouse in the minds of the classes concerned, not only a sense of their responsibility, but a new conception of their duties.

The great majority of cases could probably be dealt with by less drastic methods.

The remedy for the present condition lies in (1) the encouragement of maternal nursing under proper conditions; (2) the insuring of adequate substitute food where maternal nursing is not available or impracticable.

In regard to the natural method, it is necessary, in the first place, to insist upon the words under proper conditions; for some of the worst cases brought to the Infants' Hospital are cases that have been fed by the mother throughout.

At the present time it is becoming more and more impossible for a poor mother to successfully nurse her infant, and practically all authorities are agreed that this is not because she will not, but because she cannot. Under improved conditions we may hope to find that a greater proportion of mothers will be able to perform their natural function, but at the present time, by reason of the mothers' inability, the vast majority of infants have to be fed by other methods.

In regard to the precise organization needed in each locality, the practice as regards unessential

details may vary. But there are certain features which are essential:

- 1. A milk-depot or out-patient department where the babies can be seen at regular intervals by a doctor, who will order a food of a character suitable for each individual infant. The food so ordered shall be available day by day, and must be supplied in a manner meeting the practical necessities.
- 2. A trained nurse with special experience in regard to infants shall be resident in the district, and shall make it her business to visit the homes and to bring to light any neglect. This is a most important provision, for it is of little use to provide a food for infants if the mother is to be allowed to altogether neutralize the benefits by ignorant or perverse conduct in regard to the care and feeding of the baby.

When such an organized movement is established, then the next step is to invite the co-operation of the coroners. Upon any infant dying from a disease at all commonly associated with improper feeding or want of hygienic care, an inquest should be held in order to determine in each case whether these causes were or were not a prominent feature.

A mere haphazard inquest here and there would be of little avail. In order to establish a proper sense of responsibility among the working classes, it is necessary that the inquests should be systematic and persistent, so that practically every mother who fails to take advantage of the opportunities offered her may have the assurance that an official investigation will ensue in the event of her child's death.

The maternal instinct is very strong in the women of the working classes. Their failure to rear their infants is due to the impossibility of obtaining for them substitute food of proper character, and to the prevalence of traditional customs and superstitions.

To provide an adequate food and to break up these superstitions are the two essentials. The first is to be met by milk-depots properly organized; the second by the systematic inquiry into all deaths arising from preventable causes.

The problem of 'artificial' feeding is one of comparatively recent origin, and it is only within the last few years that methods conformable to the requirements have been available.

In order to provide a food capable of meeting the requirements so that all the tissues are adequately nourished, it is essential that the technical considerations involved should receive the most careful attention. Pure milk is the first necessity. much has to be done before cow's milk can be adjusted so as to conform with the standard of human milk and be adapted to the needs of the individual infant. The proportions of fat, lactose, whey-proteids, caseinogen, etc., have to be adjusted so as to provide the infant with a food which is capable of being readily digested, and at the same time fulfils its function as a structure-builder.

Such a food, which is an absolute essential, is beyond the means of the poorer parents. The cost of the raw materials alone is more than in many cases they can afford, and consequently it becomes necessary to consider how best the poor may be assisted so that their infants may be reared as healthy, vigorous individuals.

For the women giving birth to healthy infants are the primary asset of the nation, and if it is beyond their resources to supply these infants with food adequate in quantity and quality, it becomes an urgent necessity to meet the requirements from external sources.

But until the individual father or mother can be attacked on the ground that such an adequate food was within their power of obtaining, and they did not obtain it, the State is necessarily responsible.

The cost of adequate measures is an important consideration, and, unfortunately, the question has been rendered difficult by the confusion of two quite distinct considerations: (1) The cost of an efficient substitute for the natural food; (2) what poor people can afford to pay.

However much we may sympathize with the desire for economy, it is altogether futile to neglect the first consideration.

Having determined the best means of providing

the infants of the poorer classes with adequate food, the next most important question is to determine by what means such a food may be rendered available at the smallest possible cost. To reverse the procedure, and to decide that, since a parent can only afford to contribute a small sum, a 'food' must be provided the cost of which is to be within this limit, is altogether illegitimate. Many important points are here involved, and the two most prominent points are the market price of pure milk and the actual cost of its modification to meet the needs of young infants.

The question is a very grave one. The present situation directly threatens the welfare of the country, and in the face of a situation of such gravity we should be in no mood to ask for temporary palliatives.

The members of the Committee on Physical Deterioration had a unique opportunity of determining the meaning of present conditions, and their verdict is summarized in these words:

'It is clear that the evils . . . can only be dealt with as part of some great scheme of social education, to which many agencies must contributelegislative, administrative, and philanthropic—and by which the people themselves must be induced to cast off the paralyzing traditions of helplessness and despair.

'The Committee do not rely upon any large measure of legislative assistance; the law may with advantage be altered and elaborated in certain respects, but the pathway to improvement lies in another direction. Complacent optimism and administrative indifference must be attacked and overcome, and a large-hearted sentiment of public interest must take the place of timorous counsels and sectional prejudice.'

## The Infants' Health Suriety.

This Society was formed at a meeting held on February 11th, 1904. Its objects are to spread a knowledge of, and to put on an organized basis, the best methods of systematically dealing with the chief factors prejudicially affecting the health and life of Infants; to maintain the Infants' Hospital; to encourage the formation of institutions, such as Dispensaries and Milk Depots, etc., for the purpose of supplying, either with or without payment, food adequate in quantity and quality for the needs of each Infant; and to co-operate with other bodies, public or private, either by direct affiliation or otherwise; to make grants from any surplus funds at its disposal to any bodies responsible for undertakings in consonance with the aims of the Society; and generally to further the work of the Society by means of pamphlets, leaflets, lectures, and all other measures that may be deemed desirable.

Membership of the Society is open to all who sympathize with its objects, the annual subscription being one guinea. The payment in one sum of £30 constitutes the donor a life member of the Society, or a Governor of the Infants' Hospital.

All ladies and gentlemen interested in the problem of infant life are cordially invited to become members, especially those actively interested in such questions as crèches, milk-depots, and all matters dealing with the provision of suitable food for young infants.

The members are entitled to a copy of all publications issued by the Society, and to attend all general meetings of members that may be convened. The Society includes within its organization experts on the special

subjects concerned, and members are entitled to consult the Secretary in regard to such matters as infant feeding, milk-depots, crèches, and the like. He will obtain expert advice when it is necessary, and advise accordingly.

The Society greatly desires to elicit the practical sympathy of ladies and gentlemen who are in a position to assist it by large donations or subscriptions. Many important developments are at present retarded by the absence of sufficient working capital.

Pending the general extension of the movement on the lines indicated, the Society has appointed a Special Committee to carry on the Infants' Hospital. This Hospital serves as a nucleus for the propagation of the Society's ideas and an object-lesson of the results which can be obtained by the treatment of cases of malnutrition on scientific lines.

Annual subscriptions are urgently needed, and will be gratefully acknowledged by the Secretary.

The extreme national importance of the Society's work is submitted to the consideration of those desirous of assisting philanthropic work by legacy.

Further particulars can be obtained on application to the Secretary, 120, Victoria Street, London, S.W., or to the Matron, The Infants' Hospital, Denning Road, Hampstead, N.W.

A special quotation for a large number of copies of this pamphlet will be furnished by the Secretary when desired.